

# ***PROJECT DELIVERY OPTIONS***

***Volume 1 of 2***

***Understanding Your Options***

***Recommended Guidelines***



**Georgia State Financing and Investment Commission**

**Version 2.0**

**May 2003**

***Preface:***

This edition of the Project Delivery Selection Guidelines is intended to assist the Client Agency during the development of their Implementation Plan during the Predesign Phase. This document is the product of several months of discussion and consideration by the parties listed below, but it is not intended to be the final edition. It is anticipated that, once the principles stated herein have been tested, changes to the Guidelines will be necessary. Any comments or suggestions on how to improve this document to make it easier to understand and use would be greatly appreciated.

***Acknowledgements:***

The Georgia State Financing and Investment Commission wish to take this opportunity to express our sincere appreciation to our industry partners and those state employees who donated their time and effort to the development and production of this document. The support of these individuals and their companies is greatly appreciated. Without their assistance, not only would the quality of the document have suffered, it would not have existed at all.

The following is a list of participants who contributed to the original version of this document upon which this updated version has substantially based upon:

**Art Brook**, Nottingham, Brook & Pennington, Inc.  
**Peter Finsen**, Jacobs Facilities, Inc.  
**Rett Gunn**, Barton Malow Company  
**Mike Kenig**, Holder Construction  
**Gillis MacKinnon**, Sizemore Floyd, LLC  
**Rob Mauldin**, 2KM Architects, Inc.  
**Kurt Mueller**, Beers Construction Company  
**Tom Nesmith**, Putzel Electrical Contractors, Inc.  
**Chip Patrick**, J.M. Wilkerson Construction Co.  
**Wayne Robertson**, Brookwood Group  
**Herb Saunders**, Lakeside Project Services  
**Mark Woodall**, Georgia Branch of Associated General Contractors of America

**Gena Abraham**, Georgia Building Authority  
**David Clark**, Dept. of Juvenile Justice  
**Joe Davis**, Governor's Office of Planning and Budget  
**Ron Nawrocki**, Governor's Office of Planning & Budget  
**Mike Plumb**, Georgia Department of Technical and Adult Education  
**George Zier**, State Law Department

The following is a list of participants who contributed to the updating of this new version:

**Mike Kenig**, Holder Construction  
**Doug Stelljes**, Barton Malow Construction  
**Chris Williams**, Gleeds

**Lamar Holland**, Georgia State Financing and Investment Commission  
**Ron Nawrocki**, Governor's Office of Planning and Budget  
**Kimball Peed**, Georgia State Financing and Investment Commission

# Understanding Your Options

## Table of Contents

	<u>Page</u>
1. Purpose	4
2. Background – Project Delivery in the State of Georgia	4
3. Establishing a Common Vocabulary	5
a. What is a “Project Delivery Option”?	5
b. The List of Options	6
c. Understanding the Options	8
4. Defining the Project Delivery Options	10

### ***Appendices***

*A. Other Issues Related to Project Delivery*

*B. Project Delivery Options Translator*

*C. Project Delivery Options Matrix*

Latest Version of this document can be found at the following website:

<http://www.ganet.org/gsfic/>

## 1. Purpose

**Goal:** *The goal of this section of the manual is to assist the Client Agency in establishing a common vocabulary and understanding the project delivery options.*

Multiple project delivery options are now available to most Georgia public agencies. The purpose of this section is to assist the Client Agency during the preparation of a Predesign Study, more specifically, to assist them in identifying the project delivery options available.

This section objectively describes the various project delivery options for construction procurement, focusing on the most commonly used. Although a basic overview of each option is provided, for additional information, along with guidance to assist in selecting an appropriate option, please see Volume 2, entitled “Selecting the Appropriate Delivery Option”.

Without providing all of the answers, this section hopes to help the Client Agency answer the following questions:

**What is the list of project delivery options?  
Do we have consistent definitions for each option?**

## 2. Background – Project Delivery In The State Of Georgia

### Honoring the Public Trust

The State of Georgia strongly supports full and open competition among general and specialty contractors and their suppliers and service providers. The construction industry’s health and integrity depends on every qualified firm having an equal opportunity to compete. Public owners must be diligent in honoring the public trust while searching for more innovative and flexible approaches to construction. The public owners who choose alternative project delivery options must ensure the method chosen is properly and fairly used to serve the public interest with quality, cost effective and timely construction. Whatever option is utilized, the selection process for both design services and construction procurement should be consistent, open, and competitive.

None of the delivery options discussed in this Manual are prohibited by State law. Given current State policy and statutory requirements, however, the “traditional” method of *Design/Bid/Build* will continue to be the method by which most construction will be performed in State government (see Appendix A – Georgia Code, Section 50-5-67). This section of the manual suggests that alternative project delivery options are appropriate for the public sector if the selection process is as open, fair, objective, cost-effective, and free of political influence as the “traditional” competitive bid (*Design/Bid/Build*) method. Specific approval may be required for the use of an alternative option. For instructions on how to get the necessary approvals, contact your agency procurement professionals or the GSFIC.

Contact your agency procurement professional or the GSFIC for instructions on how to get approvals to use alternative delivery options.

### 3. Establishing A Common Vocabulary

The purpose of this section is to establish a framework for discussions on selecting the appropriate project option. The number one lesson learned in preparing this part of the Statewide Construction Manual was not underestimating the importance of having a consensus on a list and having a consensus on the definitions of each option on the list. Taking the time to establish a list and ensuring that everyone's basic defining characteristics of each option are consistent is critical among any group trying to move to the next step... selecting the appropriate project delivery option.

#### a. What is a "Project Delivery Option"?

This manual uses the definition of a "project delivery option" as a method for procurement by which the Owner's assignment of "delivery" risk and performance for design and construction has been transferred to another party (or parties). These parties typically are a Design entity who takes responsibility for the design, and a Contractor who takes responsibility for the performance of the construction.

#### A note about "Related Issues"

A major source of confusion and misunderstanding concerning the topic of project delivery options is a series of topics that are actually not germane to the discussion. These issues (referred to as "Related Issues"), while very important and sometimes critical in the proper application of a particular option, are not unique to any one project delivery option. Therefore, we have separated these related issues from the discussion.

Excellent examples of the concept of a Related Issue are *Program Management* and *Agency Construction Management*. Based on the definition of a "project delivery option" used in this manual referring to the assignment of "delivery" risk for design and construction, Agency Construction Management and Program Management are addressed as management methods rather than project delivery options. They can both be used in conjunction with any of the delivery options. A further discussion of these and "Other Issues Related to Project Delivery" are included in Appendix A.

#### What is "Price"?

To appreciate the following explanation of the difference between Competitive Sealed Bids, and the two types of Competitive Sealed Proposals, Cost and Qualifications, it is helpful to have an understanding of the Total Project Cost (TPC). It is recommended that caution is used anytime the word "price" is used and further clarification be offered to better determine which element(s) of the Total Project Cost is being referred to when the word price is mentioned.

#### Definition of "Construction Cost of Work"

Generally defined as the direct costs of labor, materials, equipment, and associated costs incorporated into the completion of a project. Construction Cost of Work is defined in contracts where Contractor's Fees and General Conditions Costs are identified and separated from the direct cost of the project.

Understanding the differences in the selection processes with alternative project delivery options requires an understanding of how total construction costs are categorized. The three categories are 1) Construction Cost of Work, 2) General Conditions, and 3) Contractor's Fee. Depending on the delivery option chosen one or more of these may be part of the "price" portion of the competition

Construction Cost of Work  
General Conditions  
+ Contractor's Fee  
**Total "Construction" Cost**  
+ Design Fees  
**Total "Design and Construction" Costs**  
+ Balance of Project Costs  
**Total "Project" Cost (TPC)**

## The “Perfect” Project Delivery Option

While no project delivery option is perfect, one option may be better suited than another based on the unique requirements for a particular project. This manual does not assume that there is only one acceptable option for project delivery. The requirements for each project should be evaluated to determine which of the various options would most likely produce the best outcome for the State.

### b. The List of Options

For purposes of this manual, delivery methods are defined by several distinguishing characteristics related to the number of primary contracts for design and construction, and the basic services provided. Thus three primary delivery methods are defined with their distinguishing characteristics as follows:

- ◆ **Designer – General Contractor** (aka Design/Bid/Build) [*Two primary contracts, GC contract after entire design complete*]
- ◆ **Designer – Construction Manager/GC** (aka Construction Manager/General Contractor) [*Two primary contracts, CM/GC contract may provide for design related services prior to construction*]
- ◆ **Designer/Contractor** (aka Design/Build) [*Single contract for design and construction services*]

Another key aspect related to the use of any delivery option is the procurement and selection process to be followed, particularly related to the construction related services. There are two basic public procurement processes:

- ◆ **Competitive Sealed Bid** - the selection is based solely on price (which must be clearly defined), with the award going to the responsible and responsive bidder submitting the lowest price
- ◆ **Competitive Sealed Proposal** - proposals require the use of evaluation factors, which may or may not include price, cost, or fee as part of the evaluation criteria.

There are four evaluation / basis of selection processes that may be followed with proposals:

1. Qualifications only [*aka Most qualified or Competitive Qualifications*]
2. Qualifications and fees, but not “cost of work” [*aka Most advantageous or Competitive Qualifications*]
3. “Cost of Work” and other factors [*aka Most advantageous or Competitive Cost*]
4. Technically acceptable, then lowest cost [*aka Best value or Competitive Cost*]

Conceivably, any delivery option can be implemented with any procurement/selection process. However, some combinations may not be practical, desirable, or prudent in most circumstances. The dual decisions to: (a) use a particular delivery option, and (b) use either bid or proposal, and if proposals, the evaluation factors and selection process, should be made concurrently. As discussed in Volume II, “Selecting the Appropriate Delivery Options”, the decision must also consider several owner and project related critical factors such as:

- The desired contractual and working relationship between the parties
- The timing and scope of services to be provided
- The timing and extent of detailed project information available to support the procurement/selection process.

Given the above, the balance of this manual discusses the more common combinations of delivery methods and procurement selection processes. For example, the traditional public sector delivery method of having separate design and construction contracts, and selecting the contractor by bid, is commonly referred to as Design-Bid-Build.

The complete list of delivery options and procurement options discussed in this manual are:

1. **Design/Bid/Build – Competitive Sealed Bid (D/B/B)**
2. **Construction Management/General Contractor - Competitive Cost Proposal (CM/GC CC)**
3. **Construction Management/General Contractor - Competitive Qualifications Proposal (CM/GC CQ)**
4. **Design/Build – Competitive Cost Proposal (D/B CC)**
5. **Design/Build – Competitive Qualifications Proposal (D/B CQ)**
6. **Design/Build – Competitive Sealed Bid (D/B Bid)**

The next section provides the reader with an understanding of how this list was determined. For further explanation, including a “Project Delivery Option Translator”, see Appendix B, Project Delivery Option Translator.

### Importance of Having a List

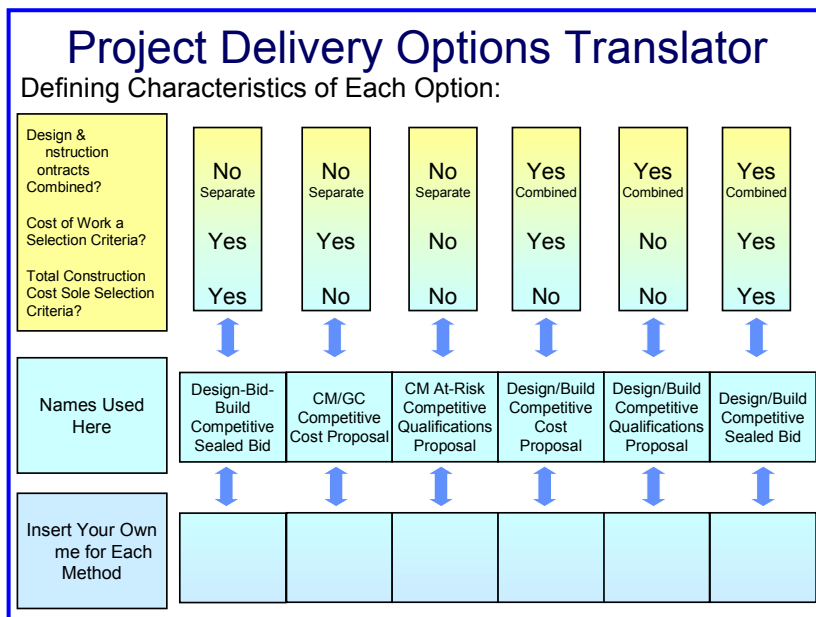
To successfully choose the appropriate project delivery option, one should first have an understanding of what the delivery options are and their defining characteristics. There are three steps in the process of Project Delivery Education:

- 1<sup>st</sup> Reach Consensus on a List of Delivery Options
- 2<sup>nd</sup> Select an Appropriate Delivery Option
- 3<sup>rd</sup> Understand How to Implement the chosen Delivery Options<sup>1</sup>

A common error made by many project teams is to skip step one believing that all stakeholders have the same list in mind. To have a truly productive conversation on this subject, one needs to first reach a consensus on a list of delivery options among any group trying to select the most appropriate option.

These basic options sometimes go under different names, so it is important to reach a full understanding of the various methods. Then, when presented with differing nomenclature, one can

recognize the option being described. (See “Translator” to right) This list is not proposed as the “right” or the perfect list. It is proposed as a framework that others can use as a basis for beginning a discussion.



<sup>1</sup> Note: This section of the manual only focuses on step 1. For assistance with steps 2 & 3, the reader should seek guidance from consultants experienced with the chosen delivery method. Suggestions on how to implement each method (step 3) will be addressed in future sections of this manual.

Many who are primarily familiar with Design/Bid/Build, think of Design/Build as the only "alternative" delivery option. Several states' attempts at legislating alternative project delivery have been very successful at adding one or two of the options to the traditional list of one (Design/Bid/Build). Few, however, it seems have included all the options very clearly.

### **Terminology**

Again, since there are no industry standard definitions, everyone has chosen a slightly different set of characteristics to define each delivery option. This **Project Delivery Option Translator** takes this to its simplest form, and identifies the characteristics that this manual uses to uniquely define each option. Each individual can take any delivery option, test it against these criteria, insert their own names and they will be able to align the name of their method with the names chosen here. If a delivery and solicitation option cannot be categorized as a version of one of these basic options, the reader is encouraged to contact GSFIC for clarification and assistance. See also Appendix B, Project Delivery Option Translator.

## **c. Understanding the Options**

### **Local Government Construction**

The 2000 Georgia General Assembly enacted legislation governing construction delivery options applicable to counties and local governments. While O.C.G.A. §36-91-1 et seq. does not apply to state agencies, it does provide definitions of common terms used in the design and construction industry, and more importantly, provides a useful reference for discussion.

*(For State agencies not exempt from DOAS requirements, see Appendix A, an extract from the Georgia Code, Section 50-5-67, for the applicable statute governing the award of contracts.)*

To better understand the project delivery options, an appreciation of the difference between competitive sealed bids and competitive sealed proposals is essential. Language included in O.C.G.A. §36-91-1 et seq., passed by the Georgia Legislature in 2000, introduced two types of solicitations, competitive sealed bids and competitive sealed proposals. Although the law pertains only to local governments and not to state government, this section of the manual builds on the *language* of O.C.G.A. §36-91-1 et seq. and further defines two types of competitive sealed proposals, cost and qualifications. Combining these solicitation types with the typical delivery options results in the list of six options.

The following matrix highlights the typical project delivery systems and the types of solicitations, Competitive Sealed Bids or Competitive Sealed Proposals. Notice that both CM/GC and Design/Build can be done with either type of Competitive Sealed Proposals. Each of these variations is available to the Client Agency.

O.C.G.A. §36-91-4 defined two types of competitive solicitations:

1. Competitive Sealed Bids
2. Competitive Sealed Proposals <sup>2</sup>

---

<sup>2</sup> A third type of proposal process, a pure Qualifications Based Selection, with no element of price competition at all, is rarely, if ever, recommended, and then only in very special circumstances and coordination with GSFIC and the Attorney General.

## Two Types of Competitive Sealed Proposals

The following section illustrates the types of solicitations and introduces the two types of Competitive *Sealed* Proposals, Competitive “Cost” Proposals and Competitive “Qualifications” Proposals:

### Types of Solicitations (Per Georgia O.C.G.A. §36-91-1 et seq.):

#### Competitive Sealed Bids:

“A method of soliciting public works construction contracts whereby the award is based upon the lowest responsive, responsible bid...”

- ◆ **Competitive Sealed Bid**

Pricing of the Total Construction Cost (TCC), including the Construction Cost of Work, is the selection criteria.

Qualifications are **not** a selection criteria<sup>3</sup>

#### Competitive Sealed Proposals:

“A method of soliciting public works construction contracts whereby the award is based upon criteria identified in a request for proposal...” There are two types of Competitive Sealed Proposals:

- ◆ **Competitive Cost Proposals**

Qualifications are weighted selection criteria

Pricing of the Total Construction Cost (TCC), including the Construction Cost of Work, is a selection criterion

- ◆ **Competitive Qualifications Proposals**

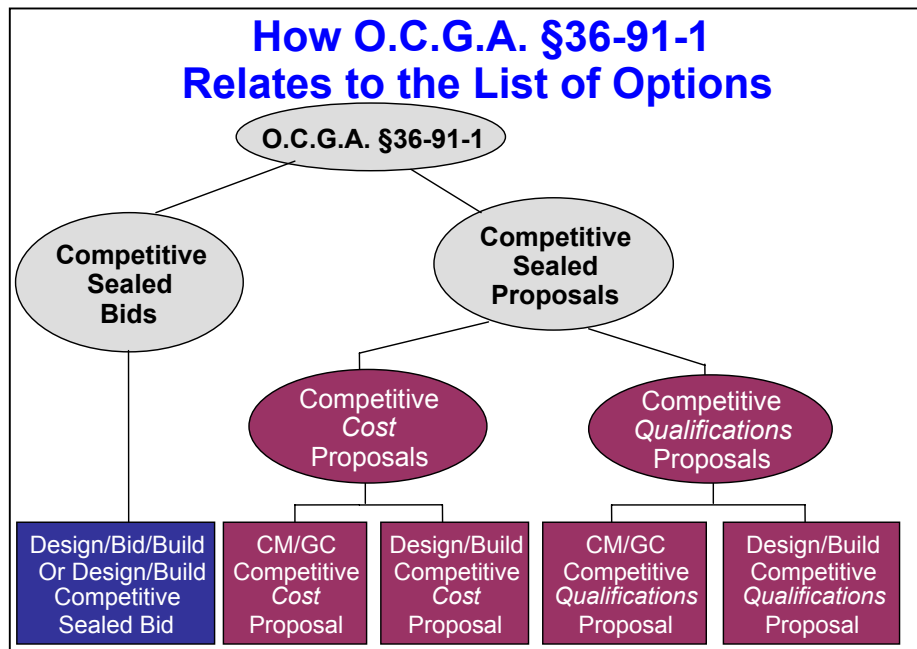
Qualifications are weighted selection criteria

Construction Cost of Work is **not** a selection criterion

Amount of Fee and/or General Conditions are typically factors

### Relating O.C.G.A. §36-91-1 et seq. to the List of Options

The following graphic illustrates how the O.C.G.A. §36-91-1 et seq. language (Competitive Sealed Cost and Competitive Sealed Proposal) relates to the list of options included in this manual:



<sup>3</sup> However, Prequalification of contractors is possible for determining which contractors are eligible to compete for a particular project or groups of projects, and is not excluded by this method.

## Construction Selection Criteria

The influence that the type of solicitation has on the ultimate outcome of a project is significant enough that it is recommended to consider the type of solicitation in conjunction with the decision on the project delivery option.

If construction cost of work is weighted 100%, then you are using traditional Design/Bid/Build.

If construction cost of work is a factor in your selection (weighted anywhere between 0% and 100%), then you are looking at a Competitive Cost Proposal.

If construction cost of work is not a factor in your contractor selection, then you are looking at a Competitive Qualifications Proposal. The contractor's fee, general conditions, experience, or experience of the team might all be criteria, but the construction cost of work is not.

Since there are no industry standard definitions for each of the project delivery options, different characteristics have been used to uniquely define each project delivery option. Given the lack of a standard set of definitions, the State has started by sharing their list of methods and the corresponding definitions used for each option. Each option is defined by a set of unique characteristics that was identified for purposes of establishing a common vocabulary for this document.

The intent is not to say that this information is “right”, but rather to share the characteristics that the State has chosen. Readers can use the Translator included in the Appendix B. to align their own defining characteristics and list of options with the methods described herein. The next section shares these unique characteristics and show how they are applied to each of the delivery options.

## 4. Defining the Project Delivery Options

The following section provides the definitions chosen for each of the project delivery options. In order to have a definition that works in as many situations as possible, the State limited the number of characteristics used to define each option to three characteristics. By having a “unique” combination of these three characteristics, each option is “uniquely” defined.

There are many “other” characteristics that apply to each of these options. Some of these “other” characteristics are typical characteristics of a particular delivery option, but are not used in this manual as a “unique” defining characteristic. The following example explains why.

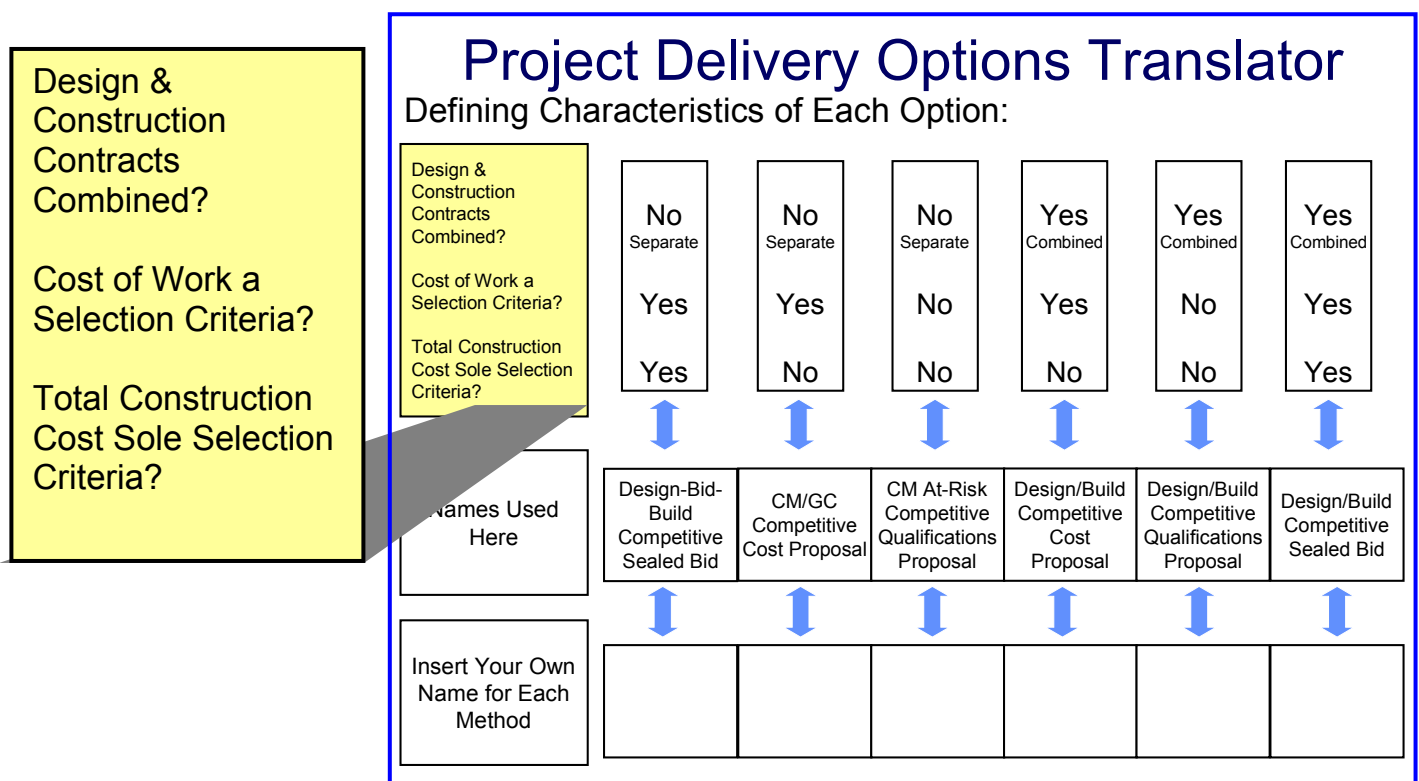
**Preconstruction services**, for example, are typically provided with the CM/GC project delivery option. Are *preconstruction services* essential to the definition of this option? Could one use CM/GC, hiring a contractor based on criteria other than low price, after the design is already complete and the need for preconstruction services no longer required? Would this still be CM/GC? Based on the definition used in this manual, the answer is yes.

If *preconstruction services* were a “unique” characteristic, then you would have to have two types of CM/GC, one with and one without preconstruction services. This would not be right or wrong. The challenge would be where to stop? The more characteristics used to define a delivery option, the more “unique” combinations and thus, more delivery options you would end up with on your list.

The goal was to keep the definitions used in the manual as broad as possible so they will work with most industry accepted definitions. Therefore, for purposes of this manual, characteristics such as *preconstruction services* are considered one of the “other” characteristics (though typical) of CM/GC, but not a “unique” defining characteristic of CM/GC.

The three characteristics chosen to define each option through the unique combinations they create are:

1. Are the Design and Construction Contracts Combined or Separate?
2. Is Construction Cost of Work a selection criterion?
3. Is Total Construction Cost the sole selection criterion?

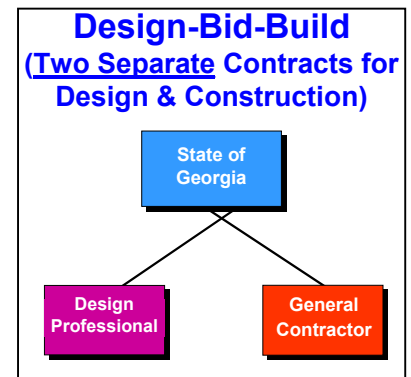


The unique combination of characteristics is listed for each option below. Some “other” characteristics that are typical of each option are provided, as well as an overview of the typical Phases of each delivery option.

## Defining Design/Bid/Build - Unique Characteristics of D/B/B

Design/Bid/Build (D/B/B) is the most common project delivery option. It is often referred to as the “traditional” option.

There are three prime players: owner, designer (architect) and builder (general contractor)



No	<b>Design and Construction Contracts Combined?</b> No
Yes	Two independent contracts (owner-architect and owner-general contractor)
Yes	<b>Cost of Work a Factor in Contractor Selection?</b> Yes
	<b>Total Construction Cost (TCC) the sole basis of selection?</b> Yes
	Contractor selection: Based on Total Construction Cost with the award going to the lowest responsible and responsive bidder.

## Other Characteristics of Design/Bid/Build

- ◆ **Relationship of Phases:** linear sequencing of each of the project phases
- ◆ **Ability to Bring Contractor on Board During Design:** No
- ◆ **Risk Allocation:** Design Risk (quality) allocated to Designer; Construction Risk (cost and schedule) allocated to Contractor after design is complete and completion of Bid & Award Phase; Owner is responsible for adequacy and completeness of design.

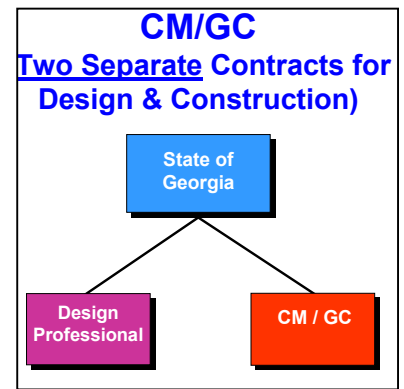
## Phases – Design/Bid/Build

- ◆ **Predesign** – The scope of the project and expectations of quality are established by the Client Agency and its consultants. A delivery option is selected and corresponding budget and schedule are also established.
- ◆ **Design** - When the Predesign has been completed, the owner selects and engages the design team for the design and preparation of construction documents.
- ◆ **Award** – When design documents are complete, they are used for construction bidding. A contractor is selected based on the lowest responsible and responsive price, and construction cost commitments are made.
- ◆ **Construction** – The owner contracts for construction with the general contractor and the project is built.
- ◆ **Occupancy** – After the construction of the entire project has been completed, the Contractor leaves the site to allow for move-in (installation of owner-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

## Defining CM/GC Competitive Cost – Unique Characteristics of CM/GC CC

(Also referred to as CM At-Risk, Competitive Cost)

There are three prime players: owner, designer (architect) and builder (cm/general contractor)



**Design and Construction Contracts Combined? NO**

Two independent contracts (owner-architect and owner-cm/gc)

**Cost of Work a Factor in Contractor Selection? YES**

**Total Construction Cost (TCC) the sole basis of selection? NO**

CM/GC selection: Based on some weighting of Total Construction Cost with the award going to the CM/GC that best meets the predefined selection criteria.

Designer selection: Qualifications based.

### Other Characteristics of CM/GC Competitive Cost Proposal

- ◆ **Relationship of Phases:** Can accommodate overlapping of each of the project phases
- ◆ **Ability to Bring Contractor on Board During Design:** Yes
- ◆ **Risk Allocation:** Design Risk (quality) allocated to Designer; Construction Risk (cost and schedule) allocated to CM/GC at the time of selection based on design at the point in time of the selection. Owner is responsible for adequacy and completeness of design.

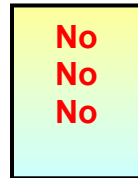
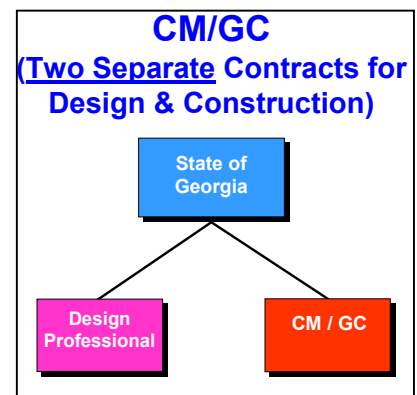
### Phases – CM/GC Competitive Cost Proposal

- ◆ **Predesign** – The scope of the project and expectations of quality are established by the Client Agency and its consultants. A delivery option is selected and a corresponding budget and schedule are established.
- ◆ **Design** - When the Predesign has been completed, the owner selects and engages the design team for the design and preparation of construction documents.
- ◆ **Award** – Generally prior to the completion of the design documents, a CM/GC is selected based on the lowest responsible and responsive price, and a Guaranteed Maximum Price for construction is established.
- ◆ **Construction** – The owner contracts for construction with the CM/GC who then contracts with the various trade contractors using cost as the primary selection criteria. The CM/GC can be available during the final design phase to assist in constructability and budget reviews. Work can begin as soon as phased construction documents are completed.
- ◆ **Occupancy** – After the construction of the entire project has been completed, the Contractor leaves the site to allow for move-in (installation of owner-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

## Defining CM/GC Competitive Qualifications – Unique Characteristics of CM/GC CQ

(Also referred to as CM At-Risk, Competitive Qualifications)

There are three prime players: owner, designer (architect) and builder (cm/general contractor)



### Design and Construction Contracts Combined? **NO**

Two independent contracts (owner-architect and owner-cm/gc)

### Cost of Work a Factor in Contractor Selection? **NO**

### Total Construction Cost (TCC) the sole basis of selection? **NO**

CM/GC Selection: Qualification Based and not base on any weighting of the Construction Cost of the Work. Rather selection is based on weighting of predefined criteria, with the award going to the CM/GC that best meets the predefined selection criteria. Designer Selection: Qualifications Based. Selection criteria may include some weighing of General Conditions Costs and/or Fee.

## Other Characteristics of CM/GC – Competitive Qualifications Proposal

- ◆ **Relationship of Phases:** Can accommodate overlapping of each of the project phases
- ◆ **Ability to Bring Contractor on Board During Design:** Yes
- ◆ **Risk Allocation:** Design Risk (quality) allocated to Designer; Construction Risk (cost and schedule) allocated to CM/GC after design is complete enough to allow all parties to mutually agree; Owner is responsible for adequacy and completeness of design.

## Phases – CM/GC – Competitive Qualifications Proposal

- ◆ **Predesign** – The scope of the project and expectations of quality are established by the Client Agency and its consultants. A delivery option is selected and a corresponding budget and schedule are also established.
- ◆ **Design** - When the Predesign has been completed, the owner engages the design team for the design and preparation of construction documents for the project.
- ◆ **Award** – Generally prior to the completion of the design documents, a CM/GC is selected based on the qualifications of the CM/GC. The cost of the CM/GC's Fee and General Conditions may also be a consideration.
- ◆ **Construction** – The owner contracts for construction with the CM/GC who then contracts with the various trade contractors based on selection criteria agreed upon by the Owner. The CM/GC can be available during the final design phase to assist in constructability and budget reviews. Work can begin as soon as phased construction documents are completed. The establishment of the Guaranteed Maximum Price can be postponed until more complete design and cost information is available.
- ◆ **Occupancy** – After the construction of the entire project has been completed, the Contractor leaves the site to allow for move-in (installation of owner-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

## Defining DESIGN/BUILD Competitive Cost – Unique Characteristics of D/B CC

The designer (architect) and the builder (general contractor) are combined into one entity.



### Design and Construction Contracts Combined?

**YES**

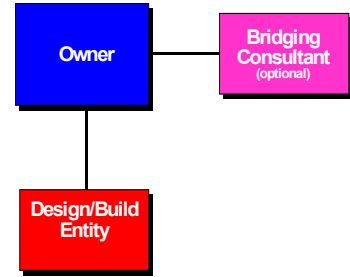
One contract (owner-design/builder) There are two prime players: Owner, and Design/Builder.

### Cost of Work a Factor in Contractor Selection? **YES**

### Total Construction Cost (TCC) the sole basis of selection? **NO**

Design/Builder selection is based on some weighting of Total Construction Cost including Construction Cost of the Work with the award going to the Design/Builder that best meets the predefined selection criteria.

## Design/Build (Competitive Cost) (Single Contract for Design & Construction)



## Other Characteristics of Design/Build Competitive Cost Proposal (D/B CC)

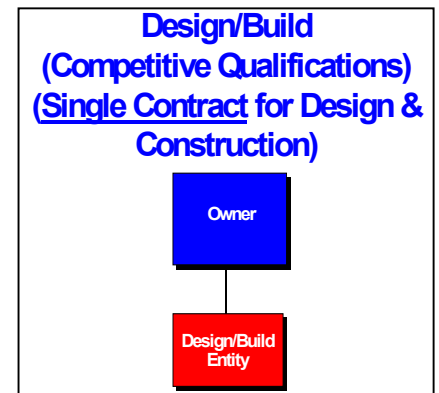
- ◆ **Relationship of Phases:** Can accommodate overlapping of each of the project phases
- ◆ **Ability to Bring Contractor on Board During Design:** Yes
- ◆ **Risk Allocation:** Design Risk (quality) and Construction Risk (cost and schedule) allocated to Design Builder at the time of selection based on design at the point in time of the selection. Design/Builder is responsible for adequacy and completeness of design and subsequently the entire project.

## Phases – Design/Build Competitive Cost Proposal (D/B CC)

- ◆ **Predesign** – The scope of the project and expectations of quality are established by the Client Agency and its consultants. A delivery option is selected and a corresponding budget and schedule are also established.
- ◆ **Bridging** - Hiring a consultant (optional) to assist in developing the design to some point without completing the final design, and then allowing another firm, usually a design/build entity, to complete the design is referred to as bridging. The initial design firm is often referred to as the “bridging architect” and the firm completing the design is the architect of record and assumes the liability for the design.
- ◆ **Design** – Based on a set of design criteria provided by the Owner, Design/Builder prepares phased construction documents. Contractor component of the Design/Builder is available during this period for constructability and budget reviews.
- ◆ **Award** – Concurrent award of both the design and construction phases. Guaranteed Maximum Price is usually established at selection.
- ◆ **Construction** – Design/Builder selects trade contractors, usually with cost as the primary selection criteria. Construction can begin as soon as phased construction documents are available.
- ◆ **Occupancy** – After the construction of the entire project has been completed, the Contractor leaves the site to allow for move-in (installation of owner-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

## Defining DESIGN/BUILD Competitive Qualifications – Unique Characteristics of D/B CQ

The designer (architect) and the builder (general contractor) are combined into one entity.



Yes  
No  
No

### Design and Construction Contracts Combined? **YES**

One contract (owner-design/builder) There are two prime players: Owner, and Design/Builder.

### Cost of Work a Factor in design/builder selection? **NO**

### Total Construction Cost (TCC) the sole basis of selection? **NO**

Design Builder selection is not based on any weighting of the Construction Cost of the Work. Rather selection is based on weighting of predefined criteria, with the award going to the Design/Builder that best meets the predefined selection criteria. Selection criteria may include some weighing of General Conditions Costs and/or Fee.

## Other Characteristics of Design/Build Competitive Qualifications Proposal (D/B CQ)

- ◆ **Relationship of Phases:** Can accommodate overlapping of each of the project phases
- ◆ **Ability to Bring Contractor on Board During Design:** Yes
- ◆ **Risk Allocation:** Design Risk (quality) and Construction Risk (cost and schedule) allocated to Design/Builder after design is complete enough to allow all parties to mutually agree. Design/Builder is responsible for adequacy and completeness of design and subsequently the entire project.

## Phases – Design/Build Competitive Qualifications Proposal (D/B CQ)

- ◆ **Predesign** – The scope of the project and expectations of quality are established by the Client Agency and its consultants. A corresponding budget and schedule are also established.
- ◆ **Design** – Based on a set of design criteria provided by the Owner, Design/Builder prepares phased construction documents. Contractor component of the Design/Builder is available during this period for constructability and budget reviews. Owner and Client Agency can participate in the process.
- ◆ **Award** – Concurrent award of both the design and construction phases. Establishment of Guaranteed Maximum Price can be postponed until more accurate scope and cost information are available.
- ◆ **Construction** – Design/Builder selects trade contractors, usually with Owner input. Construction can begin as soon as phased construction documents are available.
- ◆ **Occupancy** – After the construction of the entire project has been completed, the Contractor leaves the site to allow for move-in (installation of owner-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

## Defining DESIGN/BUILD Competitive Sealed Bid – Unique Characteristics of D/B Low Bid

The designer (architect) and the builder (general contractor) are combined into one entity.



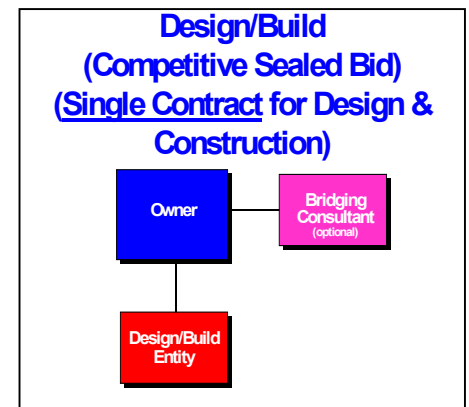
### Design and Construction Contracts Combined? **YES**

One contract (owner-design/builder) There are two prime players: Owner, and Design/Builder.

### Cost of Work a Factor in design/builder selection? **YES**

### Total Construction Cost (TCC) the sole basis of selection? **YES**

Design/Builder selection based on Total Design and Construction Cost with the award going to the lowest responsible and responsive bidder.



## Other Characteristics of Design/Build Competitive Sealed Bid (D/B Low Bid)

- ◆ **Relationship of Phases:** Can accommodate overlapping of each of the project phases
- ◆ **Ability to Bring Contractor on Board During Design:** Yes
- ◆ **Risk Allocation:** Design Risk (quality) and Construction Risk (cost and schedule) allocated to Design Builder at the time of selection based on design at the point in time of the selection. Design/Builder is responsible for adequacy and completeness of design and subsequently the entire project.

## PHASES – Design/Build Competitive Sealed Bid (D/B Low Bid)

- ◆ **Predesign** – The scope of the project and expectations of quality are established by the Client Agency and its consultants. A delivery option is selected and a corresponding budget and schedule are also established.
- ◆ **Bridging** - Hiring a consultant (optional) to assist in developing the design to some point without completing the final design, and then allowing another firm, usually a design/build entity, to complete the design is referred to as bridging. The initial design firm is often referred to as the “bridging architect” and the firm completing the design is the architect of record and assumes the liability for the design.
- ◆ **Design** – Based on a set of design criteria provided by the Owner (which should be extensive if using this option), Design/Builder prepares phased construction documents. Contractor component of the Design/Builder is available during this period for constructability and budget reviews.
- ◆ **Award** – Concurrent award of both the design and construction phases. Lump Sum is usually established at selection.
- ◆ **Construction** – Design/Builder selects trade contractors, usually with cost as the primary selection criteria. Construction can begin as soon as phased construction documents are available.
- ◆ **Occupancy** – After the construction of the entire project has been completed, the Contractor leaves the site to allow for move-in (installation of owner-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

## Appendix A - Other Issues Related To Project Delivery

Since there are no standard industry definitions for each project delivery option, many different issues are often combined with the discussion of project delivery options.

This situation has contributed to the confusion and misunderstanding concerning the topic of project delivery options. Issues that are not unique to the discussion of project delivery options, and in fact, could apply to almost all of the delivery options are referred to here as “**Related Issues.**” Prequalification for example is often mentioned as part of the description of a project delivery option, when in fact, you can prequalify with any delivery option.

These Related Issues, while very important and sometimes critical in the proper application of a particular option, are not unique to any one project delivery option. Therefore, we have separated these related issues from the discussion of project delivery. The following is a sample listing of many common “related issues” along with a brief explanation of the definition of the term as it is used in this manual:

### 1. Best Value

Factoring criteria other than just the lowest total construction cost into the selection criteria is often called a “best value” selection process. Best value competitions typically fall into one of the two following categories:

1. Qualifications / Price (including cost of work)
2. Price (including cost of work)/ Qualifications/ Design Element (if Design/Build)

In each of these scenarios, the amount of weight placed on each of these criteria varies anywhere between zero and one hundred percent. These scenarios are typically procured with a “Two Step” Process, all with a similar Step One, RFQ process. Each, however, has slightly different Step Two, RFP and Evaluation processes. The information requested, the timing of the information requested and the evaluation of the information requested varies under each of these selection criteria combinations.

### 2. Bridging

Developing the design to some point without completing the final design, and then allowing another firm, usually a design/build entity, to complete the design is referred to as bridging. This firm is often referred to as the “bridging consultant” and the firm completing the design is the architect of record and assumes the liability for the design.

Bridging, a common practice with design/build, can be used with either type of competitive sealed proposal, competitive *cost* or competitive *qualifications*. In fact, since a competitive *cost* proposal includes a weighting of the pricing of the construction cost of work, having as much design information as possible is encouraged when using a design/build competitive *cost* proposal. If, in this situation, in-house resources are not available to develop the design criteria then the use of a bridging architect is recommended.

### **3. Contract Type / Basis of Reimbursement**

The basis of reimbursement and the type of contractual relationship, Lump Sum, Cost-Plus, or Guaranteed Maximum, are often mentioned not only as part of the discussion on project delivery options, but as actual project delivery options. Indeed, there are typical contractual relationships created with each delivery option. Design-Bid-Build contracts are usually Lump Sum. Competitive Sealed Qualifications Proposal contracts, either Design/Build or CM/GC, are usually performed with Guaranteed Maximums.

However, Design-Bid-Build can be bid and then awarded as a Guaranteed Maximum, and Competitive Qualification contracts can be awarded as Lump Sum contracts. This highlights that though the basis of reimbursement and contract type (LS or GMAX) is a typical characteristic of a delivery option, it is not a defining characteristic. Therefore, the contract type is a “related issue”.

### **4. Design Percentage of Completion**

The actual amount of design information available at the time of the selection process is often tied to the project delivery option. As an example, the Design-Bid-Build (D-B-B) process works best when the design information is as complete and coordinated as possible. Ideally, the design is 100% complete.

It is possible, however, to use a Design-Bid-Build process with less than complete design information. Of course, there are risks associated with this, but having a complete design is not a requirement of D-B-B. Therefore, the percentage of design is a typical characteristic of D-B-B, but not a defining characteristic, thus, making the design percentage of completion a “related issue”.

### **5. Fast Track Construction**

The term “fast-track” refers to the overlapping of two or more phases of a project. It is most commonly referred to as the overlapping of the design and construction phases. When a project is “fast-tracked”, the designer provides design information to the contractor in a manner to support the sequence of construction. The contractor, in turn, starts with the construction work while the designer continues to complete the design.

Often used in reference to the Design/Build Method exclusively, fast-tracking of a project can actually occur with CM/GC as well or with Design/Bid/Build if multiple contractors are engaged instead of a single “prime” contractor.

### **6. Job Order/Task Order Contracts**

A Job Order/Task Order contract is a contracting method that refers to a method of reimbursement most often used when a scope of work is difficult to define. Used in lieu of a stipulated sum or guaranteed maximum, it is also often referred to as “time and material” and typically has contractual language stipulating how actual costs will be tracked and determined. This contracting method can be used with any type of project delivery option as defined herein.

### **7. Management Methods**

*Program Management and Agency Construction Management.* Based on the definition of a “project delivery option” used in this manual referring to the assignment of “delivery” risk for performance of the design and construction, Agency Construction Management and Program Management are addressed as management methods rather than project delivery options.

Since any of the Management Methods can be used in conjunction with any of the Project

Delivery Options, the subject of Management Methods is separated as a related issue and not combined with the subject of project delivery options.

## **8. Past Performance**

The prior performance or measurement of any firm's ability to perform is that firm's Past Performance. This track record can include many different types of data, both documented and anecdotal. The information can include both objective as well as subjective evaluations.

For the purposes of this discussion on Project Delivery, past performance is generally used in one of two ways: 1) for Prequalification purposes or 2) as part of the Qualifications criteria during the selection process.

If Past Performance is used as part of the Prequalification process, it is not unique to any one Project Delivery Option. In fact, as discussed below, one can prequalify with any delivery option.

If Past Performance is used as part of the Qualifications criteria during the selection process, the weighting of the past performance can vary. All types of Competitive Sealed Proposals, Cost and Qualifications, can and usually do include some weighting of a firm's Past Performances.

## **9. Performance Based Selection**

Similar to Past Performance, Performance Based Selection is a term with several different applications. Generally, there are two typical uses of the term: 1) Performance Based Selection where the term is used interchangeably with a Qualification Based Selection (where a variety of criteria other than price are weighted into the selection); and 2) A specific type of procurement where in addition to specific selection criteria, the ultimate reimbursement for the project is tied to the actual performance of the project after it is complete, and operational.

## **10. Pre-qualification**

Prequalification is the process by which qualifications of prospective competitors are examined, prior to a formal procurement. A Client Agency may prequalify with any Project Delivery Option.

## Appendix B – Project Delivery Options Translator

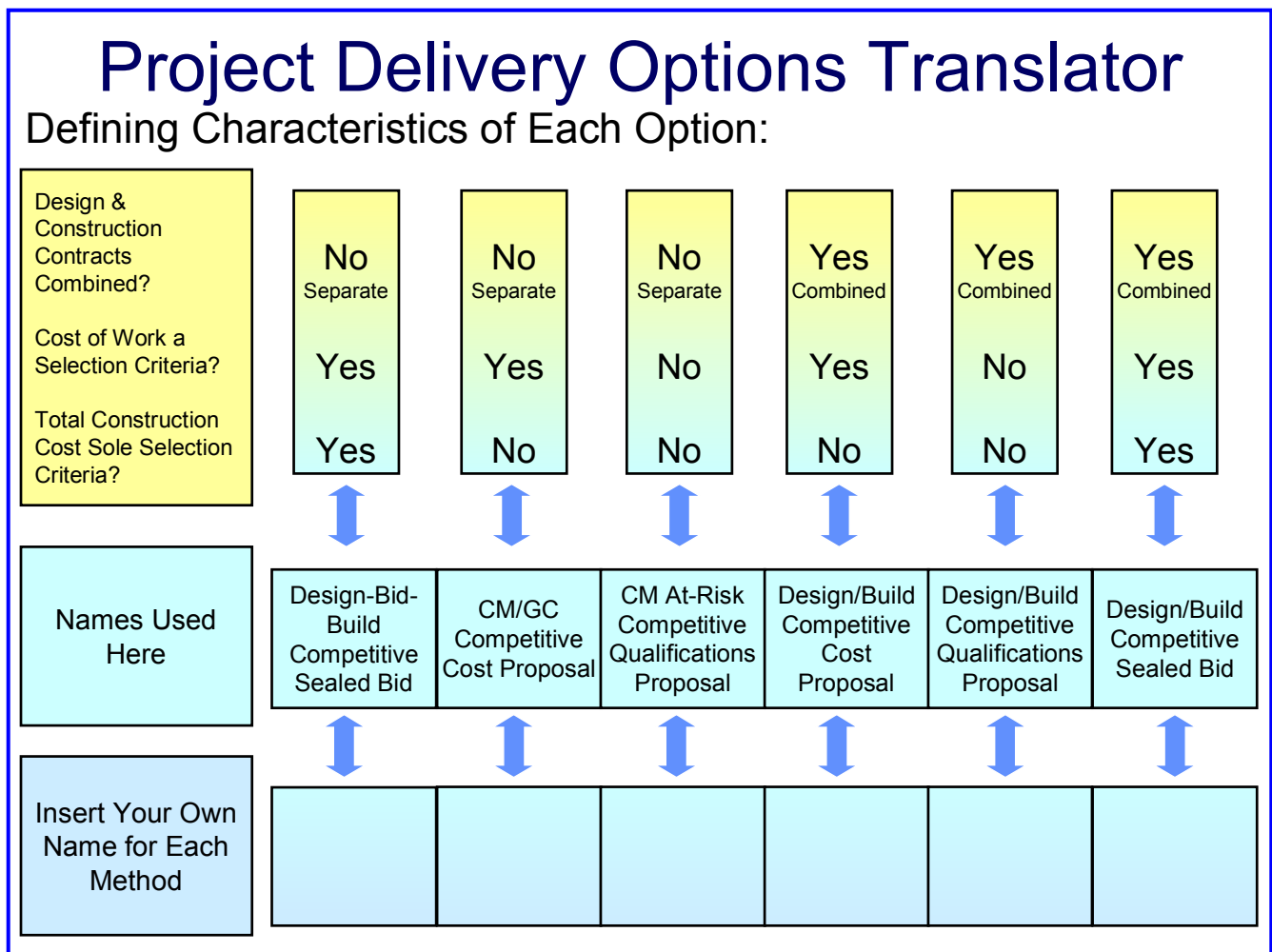
In order to have a definition that works in as many situations as possible, the State limited the number of characteristics used to define each option to three characteristics. By having a “unique” combination of these three characteristics, each option is “uniquely” defined. There are many “other” characteristics that apply to each of these options. Some of these “other” characteristics are typical characteristics of a particular delivery option, but are not used in this manual as a “unique” defining characteristic.

The goal was to keep the definitions used in the manual as broad as possible so they will work with most industry accepted definitions. Therefore, for purposes of this manual, characteristics such as *preconstruction services* are considered one of the “other” characteristics (though typical) of CM/GC, but not a “unique” defining characteristic of CM/GC.

The three characteristics and their unique combinations chosen to define each option are:

1. Are the Design and Construction Contracts Combined or Separate?
2. Is Construction Cost of Work a selection criterion?
3. Is Total Construction Cost the sole selection criterion?

The unique combination of characteristics is listed for each option below:



## Appendix C – Project Delivery Options Matrix

When the definitions for the delivery options and the selection types are put in matrix form, the following matrix is created:

<b>Georgia Project Delivery Options</b> <b>(with Selection Types)</b>		
<b>SELECTION TYPES</b>	<b># of CONTRACTS</b>	
	<b>Designer &amp; Contractor</b> <b>(2 separate contracts)</b>	<b>Design/Builder</b> <b>(1 combined contract)</b>
<b>Competitive Sealed Bid</b> <b>(Low Bid)</b>  Total Construction Cost is sole criteria for final selection	<b>Design-Bid-Build</b>	<b>Design-Build</b> <b>Competitive Sealed Bid</b>
<b>Competitive Cost Proposal</b> <b>(Best Value)</b>  Total Construction Cost and other criteria are weighted factors in the final selection	<b>CM/GC</b> <b>Competitive Cost Proposal</b>	<b>Design/Build</b> <b>Competitive Cost Proposal</b>
<b>Competitive Qualifications Proposal</b> <b>(Qualifications Based Selection)</b>  Total Construction Costs are <u>not</u> a factor in the final selection criteria	<b>CM/GC</b> <b>Competitive Qualifications Proposal</b>	<b>Design/Build</b> <b>Competitive Qualifications Proposal</b>

In Volume 2 of Project Delivery Options, “Selecting the Appropriate Project Delivery Option”, guidance is offered to assist the Client Agency in determining which of these options to recommend during their Predesign Study.